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THE ZOOLOGIST:

A

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OF

NATURAL HISTORY,

AND

JOURNAL FOR RECORDING FACTS AND ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

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I avail myself of this opportunity again to thank most heartily those gentlemen whose constant co-operation has contributed so largely to bring the 'ZOOLOGIST' to its present state of excellence, as well as favour with the public.

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Curious Preservation of Human Eyes.—In the autumn of 1858 I chanced to be in the company of a stranger who had recently returned from South America, and I was shown one of a traveller's curiosities, with a request that I would say what I thought it was. In character it was not much unlike a fossil onion. Concentric zones of various shades of colour from pink to blue surrounded a luminous centre, bright as the brightest amber, and of like intensity. My first question naturally was, "Is it animal, vegetable, or mineral?" "Animal," was the reply. Now had it been vegetable or mineral I should not have been so much surprised. It looked like some amber ornament, and might have been polished and set as a brooch! "It is animal, it is an eye—a human eye. I have ninety of them." As I held it in my fingers, the pupil seemed to glare at me, so bright was it; the uvea, ciliary body and ora serrata, all were distinctly and definitely traced on one globe,—nay, even the radiated lines on the iris were noticeable. I asked for an explanation, and elicited the following:—"It is from an Indian cemetery near Arica, in Peru. The cemetery lies in a vale strongly impregnated with saltpetre, which seems to have acted on the humours of the eye, and given them fixedness and intensity. From some cause or other the burial-place has been long deserted by the Indians for one higher up the valley, and the bodies, being interred near the surface of the ground, have become exposed to view. I visited the cemetery at sunset, and noticed the peculiar glass-like appearance of the eyes. Some I removed from their sockets, and found them as hard as amber to the touch. Curiosity led me after to the spot, till I had collected quite a stock of eyes." But, I remarked, "May not the Indians, during some process of embalming, have substituted glass eyes in the place of the natural eyes?" "No," replied the stranger, "as I have them with the tendons and ligaments attached, and in some cases I had difficulty in extracting them from the skull." Such is the story, nearly in the words of the traveller, and I place it at your disposal, as you may probably wish to give it publicity. —*Peter Inchbald; Storthes Hall, near Huddersfield, October* 28, 1860.

Rabbit apparently fascinated by a Stoat.—As I was walking on the hill-side above West Creech, Farm, in Penbeck (the down was scattered with very low furze bushes), my attention was arrested by a cry of distress; it proceeded from a rabbit which was cantering round in a ring, with a halting gait. I watched it for some minutes, but as the circle became smaller and the rabbit more agitated I perceived a stoat turning its head with the rabbit's motion, and fixing its gaze upon it. I struck a blow at the stoat and missed it; its attention was thus withdrawn, and the rabbit ran away with great vigour in a straight direction.—*Henry Bond; Vicarage, South Petherton, Somerset, August* 14, 1860.

Hedgesparrow fascinated by a Snake. — Up the hill above Tyneham, towads the sea, I was struck by the shrill cry and fluttering agitation of a common hedgesparrow, in a whitethorn bush. Regardless of my presence, its remarkable motions were continued, getting, at every hop from bough to bough, lower and lower down in the bush. Drawing nearer I saw a common snake coiled up, but having its head erect, watching the sparrow; the moment the snake saw me it glided away, and the sparrow flew off with its usual mode of flight.—*Henry Bond; Vicarage, South Petherton, Somerset, August* 14, 1860.

A Tom Tit in Difficulties.—Last evening, as I and a friend were on our way to Dulwich Wood, on entomological thoughts intent, we saw at a gas-lamp — not a moth—but a blue tit (*Parus cæruleus*), hanging back downwards in the space left unglazed at the bottom. In our humane endeavours to rescue it from its dangerous position we only frightened it completely into the lamp, where it kept flying into and resting above the flame, till at last it managed to get out where it got in, no doubt considerably singed, if not burnt. What can have induced this bird to fly to a gas-lamp at that time of night? It could hardly have chased a moth there, as I fancy it is of strictly diurnal habits, and it could scarcely have selected the spot for a roosting-place before the lamp was lighted, as it would certainly have been scared by the lamplighter. I fancy that, having been at roost near the lamp, the attraction of the light had proved too much for it.—*Robert McLachlan; Forest Hill, October* 20, 1860.

Occurrence of the Little Bittern near Taunton.—On the 20th of August last a specimen of the little bittern was shot as it rose from a bed of rushes on the river Tone, about half a mile below this town. It is now preserved, and in the possession of Mr. Haddon, the person who shot it. — *W. F. Dewey; East Reach, Taunton, October* 15, 1860.

Occurrence of the Surf Scoter near Scarborough. — I have great pleasure in informing you that a fine mature specimen of that extremely rare duck, the surf scoter (*Anas perspicillata*), was shot by myself, on Monday, the 25th of October, on the rocks at Gristhorp, near Scarborough: it was swimming with another duck of its own size and colour, and, in all probability, of the same species. — *Alwin S. Bell; 11, Crown Terrace, Scarborough, November* 2, 1860.

Prognostication of an Early and Severe Winter.—Quantities of wild fowl have already been seen off our coast, besides many other indications of an early and severe winter.—*Id.*

Natural-History Notes from Bengal. By E. A. W. Tayler, Esq.

The following extracts from the letters of my friend Edward A. Wood Tayler, Esq., of Bamundie, Bengal, who is a most accurate observer of nature and a keen sportsman, will be interesting to your readers, as they contain truthful remarks on the habits of certain birds and animals.

R. H. T. Gilbert.

Kensington.

"Bamundie, near Kishnaghur, Bengal.

"I am in perfect health, and India seems the very place for me, but remember that I never touch a drop of anything but water, and whilst other fellows are obliged to lie down to get rid of the effects of the beer, &c., imbibed, at tiffin, I take my gun and go cruising about under the mango tops. About here there is not much jungle, and yet now and then you fall in with a leopard, but it is no end of a place for birds, and I never before saw such beauties as one sees from day to day flying about everywhere. I enclose some feathers, but they are nothing to some that I mean to send you. Ducks, geese and snipes swarm in countless hundreds. I have also shot eight different kinds of kites and hawks, and some very large horned owls, also some very small ditto. I shot one day three beautiful fish-eagles. Old Forsyth* shoots better than ever since it has been rebored for me. A jackall, which is a most tough brute, I rap over as dead as a nail at forty yards. I wish I could give you a view of my room, hung all around with skulls of birds and animals, feathers and claws, and lots of other natural-history objects so dear to your eyes. I have lots of eggs, but I have had great difficulty in procuring them. A friend sent me two eggs of the alligator. I stayed a day with my friend Mr. S., who is a great shot and sportsman; of course we went out shooting, and although it was September, the worst month in the year, yet we managed to bag lots of green pigeons (capital eating are these fellows I can tell you), black and white curlews as they are called here, but one of these is the ibis I think; however, when you get the skins I intend sending you, you will be able to make out all these gentlemen. We also shot ducks, snipes, plovers, black partridges and quails. It is capital sport, as you never know what you may come in with in your walk. I also rolled over a fine tiger cat and two very small foxes; these latter were beautiful little creatures. I have killed lots of a bird here called goiles or snake-birds, because when swimming they sink so low in the water as only to show the head and neck: their feathers are very beautiful, and make splendid plumes when mixed with the crest-feathers of the padi-bird, a kind of egret I think, that is found in immense numbers all over the rice fields, whence its name. It is indeed a beautiful sight to see a flock of these birds; their snowy plumage becomes a most dazzling white under the fierce and brilliant light of the eastern sun, the dark green of the landscape and the coppery sky forming one of those pictures of Nature that only the true naturalist can thoroughly appreciate.

"The kingfishers out here are very brilliant, and beat every bird as far as plumage goes; they look like gems as they fly over the water. In habits and flight, as far as I have seen, they are similar to our own little friend in old England.

"I have had a tame mongoose given me; he will run after me like a dog; he hates blackies but loves snakes. Three days ago I saw a cobra in a hole of the garden wall, and after some little trouble I got him out and brought him in an earthen pot, called a gumla, in front of the house; I then called my friend 'Boots' (the mongoose), and it was very interesting to see the snake with his hood expanded standing erect on his tail watching the movements of 'Boots,' who took it rather easily for some time, but he knew what he was about, and when he did spring the snake was as dead as a stone, for 'Boots' had fixed him by the back of the neck, quite close to the head. It is wonderful that these little creatures never miss their aim. The house was overrun with rats before he came, but now there is not one to be seen. I have lots of things for you; no end of bottles full of sweet little snakes and beetles; for all the curious little things I catch I keep in good spirits. I have bagged no less than fifty flying foxes. I have killed bats of all sizes, from the flying fox down to the size of a humble bee."

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* His double gun is by the celebrated maker Forsyth.

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"In answer to your questions, 1st. I have not seen any pheasants, as I am a great way from the hills. I read your note signed 'Ramrod,' in the 'Field' newspaper, on the introduction of foreign game. 2nd. I have killed large game, as my last letter shows how I slew a tiger-cat, leopard and brace of fine boars, on foot in the jungle. 3rd. I have seen a great number of mango birds; they are very common in this district, although not in other parts of Lower Bengal. 4th. I have not, I am sorry to say, skinned any birds as yet, having only shot them for their feathers or for the table; the reason is that the weather has been so fearfully hot; but in the cold weather I intend making a good collection of bird-skins, and will send them to you; the principal shall be owls, hawks, eagles, &c. 5th. I have taken great notice of the habits of the birds, &c., that I happened to see, and you shall have these notes. The numbering system that you recommend is just the thing for me, as I do not know the names of half the things I kill. 6th. I have studied the habits of the cobra di capello snake closely, and shall give you a few remarks after finishing the answer to the question concerning the habits of the snake bird. These birds are mostly found in pretty good numbers in the large unfrequented inland lakes, and when in the water all the body is hidden from view, only the head and neck being visible. They so resemble a snake when in the water that the most practised eye would be deceived at the distance of fifty yards. The neck is long, as is also the head and beak, and the neck has a most graceful motion when the bird is swimming. They are great divers, and will remain under water for the space of a minute and a half, and during that time will swim a very considerable distance. They are clumsy at rising, but when once fairly on the wing fly at a great rate. The feet are large and webbed, like other divers and ducks; the body is of a longish shape; the skin of the neck is very beautifully marked, and it will stretch to a great extent. I intend sending you the skin of the male bird this cold weather, and you will then be able to determine its species correctly. Now for a few words on the cobra, "the most deadly of Indian snakes." I have been lucky enough to come across and kill fifteen of them since my arrival here. The only thing I have noticed in them is that they are far more cunning than any other snake, and when hotly chased will not hesitate to stand up and show fight, making a kind of blowing noise all the while: the natives say that if the cobra does bite when in this state of passion death is certain within an hour. One did a most curious thing to me; I was in full chase, and about twice his length behind him, when he suddenly raised himself backwards, and by so doing as near as possible laid hold of my leg, but on finding he had missed his aim he slunk off at a rapid pace, when I settled his hash with two cracks of a bamboo. I once caught a very large cobra in a curious way. This worthy used to live in a very thick wall in the hen house at Katchekatta, and nearly every night destroyed from three to five birds: all endeavours to catch him having heretofore failed, I hit upon the following plan. Before his hole I drove a large nail into the ground, and to this I fastened a bit of strong whipcord, about two feet long; at the end of the cord I lashed a fine sharp eel-hook, and upon this I tied with a thread a nice tempting lively yellow frog; then, leaving the yellow gentleman for the night in a very jumping humour, I retired, and early the next morning sure enough, as I expected, the frog and half the twine had disappeared down the hole. I now put a stone against the hole, unfastened the end of the string that was tied to the nail, and this I again fastened to a stout stick; then, removing the stone, with one jerk I brought the writhing cobra to light, who, never expecting this kind of treatment, growled like the very devil. I skinned him, as he was the largest I ever saw, being five feet long.

"Getting birds' eggs in this country is very difficult work, the natives being such fools that they never know how to find a nest, and the only way I have got the few now in my possession was from watching the birds about a tree and then sending a man up to bring down the eggs.

"The birds that have most taken my fancy are the four kinds of game about here, but which, I am sorry to say are fast disappearing before the steps of civilization, and very soon not a partridge will be found about this part of Bengal. I now send a sketch from a dead bird just rolled over by old Forsyth, the chicose partridge of India; and also another sketch, being the gray partridge; both are to the very life, although I did them myself. I intend, when I get a chance, to send you a sketch of both the black and painted partridge. This latter bird is rare about here, I having only shot one.

"I have just obtained five splendid Longicorn beetles. My insect collection is going on famously.

"E. A. W. Tayler."

Captain Taylor's Sea Serpent.—A friend, who has the opportunity of communicating with Melbourne on the subject of the young sea serpent which Captain Taylor says (Zool. 6985) he presented to the Museum at Melbourne, has ascertained through Mr. Coates, of that town, that Captain Taylor is so far correct, that he did at the time specified present a specimen of Pelamys bicolor to the Museum in question, and Professor M'Coy exhibited the same to Mr. Coates. Of course there is no rational ground for concluding that this small sea snake is the young of any such gigantic creature as Captain Taylor has described.—*Edward Newman.*

A Female Adder Swallowing her Young.—Walking in an orchard near Tyneham House, in Dorsetshire, I came upon an old adder basking in the sun, with her young around her; she was lying on some grass that had been long cut, and had become smooth and bleached by exposure to the weather. Alarmed by my approach, I distinctly saw the young ones run down their mother's throat. At that time I had never heard of the controversy respecting the fact, otherwise I should have been more anxious to have killed the adder, to further prove the case. As it was she escaped, while I was more interested in the circumstance I witnessed than in her destruction.——*Henry Bond; Vicarage, South Petherton, Somerset, August* 14, 1860.

Discovery near London of a Physa new to the British Fauna.—Early last spring I observed in a water-tank, in the Royal Botanic Garden at Kew, a mollusk, which at the time I supposed to be the Limnæa peregra, but which on a closer examination, a short time since, I found to be a species of Physa, and quite distinct from either of the indigenous species P. fontinalis and P. Hypnorum. I became interested in the discovery, and I set to work immediately to endeavour to find out by what means it came there, and in order to ascertain its species I forwarded a few specimens to an eminent conchologist of my acquaintance, who pronounced it to be the Physa rivalis of Maton and Rackett. I sent some afterwards to the British Museum, and was informed that, according to the specimens there belonging to the collection of M. D'Orbigny, it was the Physa acuta of Draparnaud, and that its native habitat was the West Indies. I was led, therefore, to infer that it had been imported with some exotic aquatic plants, but upon giving the subject still further consideration two facts presented themselves to my mind which militated strongly against the presumption of its being a native of the tropics, first, because tropical aquatic plants are only received at Kew in a dry state, and I question whether a mollusk so decidedly aquatic as the Physa could in any stage of its existence retain its vitality, and survive the lengthened period occupied in the transmission of the plants to this country; and secondly, assuming that it did so survive, could anything tropical having life retain its vitality after being exposed *al fresco* to the inclemency of a long and severe winter like the last? Being satisfied, therefore, that it was not an exotic species, and that its native habitat was not within the tropics, I continued my investigation, and at length I obtained a clew which brought to my recollection that nearly twenty years ago I collected some aquatic plants in a certain locality in the vicinity of the metropolis, for the use of the Royal Botanic Garden at Kew; and as I have just discovered that the Physa is found in that locality, as well as in Kew Gardens, the inference is obvious that it must have been introduced to the Royal Gardens with the aquatic plants in question, where it must have remained ever since. But I am constrained to refrain from mentioning this locality at present, from the fear that if known the Physa might become extinct there, owing to the rapacity of collectors in collecting specimens.—*A. Choules; Royal Gardens, Kew, October* 20, 1860.

On the Habits of Phronima atlantica.—Although it is perfectly true of the large-headed transparent shrimps comprising the family Phronomidæ, that they are more or less parasitic, being found stowed away in the pouches and other cavities of the equally pellucid Acalephæ, yet sometimes they swim freely about and are frequently taken in the towing-net. I have taken a specimen from the cavity of a large Salpa, so they may be said to be parasitic on Mollusca as well as on Acalepha. In its free and independent state, when observed in a vessel of sea-water, Phronima atlantica is perfectly transparent, and the slender legs and tumid chelæ of the fifth pair are covered with red-brown dots. In its habits it is somewhat peculiar, even for a shrimp. Suspended head downwards in the water, it remains motionless like a spider in its web; the long hind legs extended with the tarsal joints all bent back; the prehensile fifth pair, with its gibbose spotted hand, arched inwards, and the post-abdomen curved forwards towards the head. In this attitude of attention he remains eagerly on the watch, and while staring with its great eyes, separating its jaws, and keeping ready its mandibles, the false feet of the abdomen are incessant at work producing a current towards the mouth. No sooner is some minute organic particle drawn within the influence of the vortex than the head and tail of the Phronima are brought together, and the object is immediately seized, if large enough, by the thumb and finger of the freckled hands, conveyed to the mouth and greedily devoured. When placed in spirits the skin becomes opaque, the colour of the legs is changed into a pale yellow and the red-brown spots disappear. When we compare the delicate oceanic organisms seen fresh from the deep sea with the specimens in our bottles, well may we mournfully exclaim with St. Pierre, "Our Books are but the Romance of Nature and our Museums her Tombs."—*Arthur Adams.*

***Note on the Rate of Speed of Flight of a Butterfly.*—October 12th, at 5 p.m., on board the "Pera," some twelve miles east of Cape Bon, Africa, when sitting in the after part, I observed a painted lady butterfly. It came from the sea and readily overtook the steamer, which was then making ten and a half knots an hour. I observed the insect for about twenty-five minutes, during which it made three distinct flights from the ship, and each time (as I thought) I saw it alight on the waves. The wind was nearly ahead and tolerably strong, and the log was heaved at the time, by which I determined the rate of the vessel. As I have never in my entomological reading met with any one actually testing the rate of speed of the flight of a butterfly, I deem this note worthy of preservation in the pages of the 'Zoologist.' I may add that the insect alighted and again flew away, apparently quite untired — soaring high and flying at times directly aft.—*C. Horne; "Pera," October* 12, 1860.**

Critical Notes on and Diagnostic Characters of the New British Sesia of 1860. By J. J. Reading, Esq.

Lately I have been engaged in trying to make out this species, and believe I have succeeded satisfactorily in identifying it. Mr. Newman, in the 'Zoologist' (Zool. 7153), claims the honour of first introducing this species to the British list, and refers the reader to his "Monographia Ægeriarum Angliæ" (Entomological Magazine, vol. i. p. 79). Mr. Newman considers this insect to accord with Trochilium Muscæformis of Esper. In this I consider him correct, but the description in his Monograph is so short, and some portions of it so unlike the insect, that I need not say that the description is insufficient to identify the species, but Mr. Newman, in the 'Zoologist' (Zool. 7153) amends his description of the monograph: this amendment is more faulty than the first description, and I feel certain that Mr. Newman will not take it amiss if I venture to point out the mistakes:—"Antennæ fuscæ, apice nigricantes, medio pallidiores." (*Vide* Monograph). The foregoing description certainly does not accord with the characters of Esper's Muscæformis, nor indeed with the best description that has hitherto appeared of Sesia Philanthiformis, *viz.*, that by Dr. Staudiger, in his 'Berlin Species.' It runs thus: "Antennæ articulis 45 compositæ, cæruleo-nigræ, articulo basali infra flavescente in ♀ apicem versus supra squamis paucis albis, maculum conformantibus mixtus, in ♂ dentibus aculio instructis." It is plain these two descriptions do not refer to the same insect.

Next to be considered are Mr. Newman's amending remarks on this

species (Zool. 7153): "I may, however, remark that the number of pale rings on the abdomen is three only, instead of five." (Monograph says five or six, *viz.*, "quinque aut sex cingulis flavescentibus.") Now, though specimens are known having two, three, and seven belts, yet it is remarkable that there are none recorded having five or six belts; therefore, in this particular, the amendment is nearer an improvement, as it mentions the typical number of annuli on the abdomen, *viz.*, three. Mr. Newman continues, "The indistinct whitish annulus on the antennæ of the female distinguishes this from all cognate species." Taking Mr. Newman's "annulus" to be the "macula" of Dr. Staudinger, the conclusions come to are certainly wrong, as this same marking is in the other sex of the same species, but indistinctly, and it is also on the antennæ of both sexes of Chrysidiformis; and in the 'Zoologist' (Zool. 4928), Mr. Newman describes the antennæ of the female of S. Scoliæformis, "with a long whitish space on the apical portion." In a male of this species that I possess (it was sent to me by the late discoverer) the whitish macula is indistinctly to be seen. In the female of S. Ichneumoniformis what is termed "pale," "paler," in the middle of the antennæ, is but a modification of this marking, therefore I take it that the mark mentioned would not in itself be sufficient to "distinguish it from all cognate species."

It is said that the specimen from which Mr. Newman drew up his description, and which was printed in his Monograph, "is but a damaged specimen of S. Ichneumoniformis." If this assertion be true, it will account for the discrepancy between his description and other authors. I will not say (until I have seen the specimen) whether it is that insect or not, but of this I am certain, *viz.*, that the greater part of his description applies more to S. Muscæformis (*Esper*) than to S. Ichneumoniformis of authors. Having good specimens of the new captures,—one, a fine female, taken by myself at Whitsand Cliffs, Cornwall, last June; others taken by Mr. King, of Torquay, with notes of my own thereon. I have also two continental specimens, obligingly lent to me by J. R. Hind, Esq., for the purpose of helping me to identify the species; and George Wailes, Esq. kindly furnished me with copies of the descriptions of Sesia Philanthiformis, (*Lasp.*, *Och.*, *Boisd.*). Upon the before-mentioned materials I chiefly rely, and have satisfied myself that the new Sesia is S. Philanthiformis (*Linn.*, *Hub.*, *&c.*) and S. Muscæformis (*Esper*). Both these names are in the field, but one is quite sufficient; I am not certain which has priority, S. Philanthiformis has had its present name from the time of Linnæus, and been called the same by Hubner, Ochsenheimer, Godart, Boisduval and Staudinger, and even if S. Muscæformis has the right in priority, this is not the time to make any alteration, as diversity of nomenclature between our lists and those of the continent is very undesirable, If any alteration ever takes place it must be done when a thorough revision of the group is made; for, as there is another species bearing the title of Muscæformis by Duponchel, Boisduval and Herrich-Schæffer, it would not do to have (particularly in one genus) two insects bearing the same name, I shall therefore introduce it by its usual appellation and give a description.

SESIA (*Fab.*) PHILANTHIFORMIS, *Linn.*, *Lasp.*

Sesia Philanthiformis, *Linn.*, *Lasp.*, *Hub.*, *Och.*, *Godt.*, *Boisd.*, *Staud.*
Trochilium Muscæformis, *Esper.*

Fronte nitido-cæruleo-nigro. Palpis albis, margine externo apiceque nigris. Antennis cæruleo-nigris, in mare dentibus spinatis et ciliatis, infra flavis plus vel minus a base, in fœminâ infrà fuscis, suprà apicem versus maculâ magnâ albâ; qua maculâ in mare imitata est squamis parcis fuscis vel flavescentibus aliquando obsoletis. Abdomine suprà cæruleo-nigro vel metallico-fusco-nigro squamis flavis consperso, in insectâ typicâ cum annulo in marginibus posterioribus 2, 4, 6 segmentorum, in varietatibus 1, 2, 3, 4, 5, 6, vel 2, 4, vel 2, 7 argenteo-niveo sæpe flavescente. Fasciculo terminali in mare suprà subfusco, infrà flavescente, in fœminâ suprà centro sordido et subflavescente, lateribus subflavescente, infra sordido.

Size of the male 7—8 lines; of the female 6—9 lines.

Forehead bluish black, two chalk-white patches in front of the eyes. Palpi chalky white, with the outer margin and apex black. Posterior margin of the head (collar) yellow. Antennæ in the male bluish black above, underneath more or less yellow from the base, but discontinuing a third (if not before) from the apex; in the female brownish underneath; a third from the apex on the upper side is a large white patch (the patch varies), which in the male is represented by a few obscure brownish yellow scales, and in some specimens are obsolete. Prothorax and mesothorax on the upper side are shining, bluish black, on which is a dorsal yellow line, more or less narrow or shorter and longer. Metathorax brownish black above, blended with yellow scales, having on each side long yellow or hoary hairs.

Tegula bluish black, shining, the inner margin broadly yellow. Fore wings: costa bluish black, bluish brown or blackish brown, on the extreme edge near the apex margined with bright yellow scales; outer and inner margins (and sometimes the central band) brownish black; the terminal band is diversified with three or four wedge-shaped pale yellowish patches; the usual longitudinal cuneiform area and the external rotundate areoli are pearly white, the edges of the former and the nerves passing through the latter with very pale yellowish or white scales; the nerves through the rotundate areola very much mixed with brown; a streak just above the inner margin more or less yellow (it is, however, wanting in some specimens and is replaced by a hyaline space). Hind wings: the fringe line broadly brownish black, widest in the middle and gradually narrowing to the base of the wings; fringes to all the wings ashy gray, with the apices of the scales whitish, much whiter towards the base of the hinder wings. Coxæ growing dusky, the front ones conspicuously white, the hinder ones variegated with white. Femora of a dusky colour, the front ones approaching a clay-colour on the upper side, hinder ones have the outer margins somewhat yellowish. Tibiæ of a dusky colour, the front ones yellowish above, the hind ones are sprinkled with chalk-coloured scales; the spurs, the terminal hairs at the joints and tufts on the outer margin more or less yellow. Tarsi: upper side whitish, clay-colour or yellow, beneath brownish. Abdomen above iridescent, brownish black, besprinkled with yellow scales; especially on the middle of the segments; on the under side the whole (in some specimens) is covered with pale yellow scales; on the posterior margins of the second, fourth and sixth segments with a narrow silver-white or snow-white belt. The terminal tuft in the male dusky above and yellow beneath; in the female dull yellow, and dusky intermixed in the centre above, dull yellow at the sides and dusky beneath.

Dr. Staudinger gives three varieties in his 'Berlin Species':—

"*α*. Abdominis segmentis 2—7 postice tenuiter niveo sive flavido annulata."

"*β*. Abdomen linea laterale, latu distincta flavescente.

"*γ*. Neuris antennarum pauci tantem dentes aculeis instructi; areæ tres permagnæ, externæ areola quinta ceteris non brevior."

I can add to the above two more varieties, *viz.*:—

δ. Abdomine nigro attenuatissimo versus anum cum annulo subtili albo in marginibus posterioribus 2, 4 segmentorum ♂.

e. Omninò perminutum exemplum circiter 6 lineæ in expansione alarum; abdomine pariter lato per totum, margine posteriore omnium segmentorum annulato ex albido præter postremo ♀.

J. J. Reading.

Plymouth, October 19, 1860.

Description of the Larva of Thyatira derasa.—Rolls in a ring when touched. Cylindrical, rather stouter anteriorly, velvety and somewhat transparent. Colour reddish brown, with a slender median black stripe, and a circular conspicuous white spot on each side of the 5th segment, sometimes a smaller white spot in the same position on each side of the 6th and 7th segment: the belly is much paler than the back: the spiracles are black. Feeds on Rubus fruticosus (bramble), and is full fed on the 12th October. I am indebted to Mr. Thomas Huckett for this larva, as well as for most of those which follow.—*Edward Newman.*

Description of the Larva of Ceropacha flavicornis.—Head pale wainscot-brown, with a black spot on each cheek near the mouth. Body dingy yellowish green, the 2nd segment having six black spots, all of them close adjoining the head, the two dorsal ones larger than the rest; on each of the following segments are five black spots, the largest of which constitute a dorsal series, the second, smaller, constitute a supra-spiracular series, and the third, the smallest, an infra-spiracular series; each of the larger black spots has a row of three white dots above it and one white dot below; the 3rd and 4th segments have a transverse band or belt of twelve white dots. It feeds on Betula alba (the birch) of which it rolls up the leaves into a kind of case, and only comes partially out to eat: it is almost impossible to beat this larva: in order to obtain it, the rolled-up leaves must be sought out and picked: full fed the 10th July.—*Id.*

Description of the Larva of Dipthera Orion.—Whilst staying in Hampshire this summer I took a single female D. Orion. As she was slightly worn and chipped I kept her in the hope of obtaining eggs, and was not disappointed. These in due time hatched, and the young larvæ fed well till their last moult, on birch. They then without any apparent reason began to die off. I introduced some oak twigs, for which the biirch was immediately deserted, but out of a numerous brood I only succeeded in obtaining four pupæ. I am inclined to think that in a state of nature this larva feeds indiscriminately upon oak and birch, wandering from one to the other. I never but once beat the larva; this was in Suffolk, where I thrashed two out of a birch bush in a wood near Ipswich, and thence it was that I fed my young larvæ at first solely on that tree. The following description of the larva may be acceptable to the readers of the 'Zoologist':—Back bluish black. On the fourth, sixth and ninth segmental divisions a large primrose-yellow blotch, and smaller ones of the same colour on the third and anal segments. On the second and third segments the rudiments of two central primrose-yellow dorsal lines. Dorsal and lateral segmental divisions girt with a belt of orange and primrose-yellow tubercles surmounted by tufts of pale reddish hair. Subdorsal lines primrose-yellow, interrupted and studded with various sized primrose-

yellow spots. Lateral lines four or six in number, black, interrupted with yellow or orange; intermediate spaces yellow. Head black, slightly marked with yellow. Belly dirty gray, spotted and marked with black and white. Feet and prolegs yellowish, with black markings. Full fed the beginning of September. In appearance strongly resembles the larva of Liparis Salicis. In habits allied to the larvæ of the genus Acronycta. The eggs are flat and yellow. The pupa is enclosed in a cocoon of gnawed bark or rotten wood. It is dull red and very like that of A. Alni.—*H. Harpur Crewe; The Rectory, Drayton-Beauchamp, Herts, October* 27, 1860.

Description of the Larva of Acronycta tridens.—Does not roll in a ring or feign death when disturbed. Body somewhat incised at the interstices of the segments, hairy, and having a conspicuous hump on the 5th and 12th segments. Head black, shining, but emitting so many hoary hairs, as to give it a gray appearance. Body black, beautifully ornamented with orange and snow-white markings: 2nd segment black, with a small median white spot on the back; 3rd and 4th segments slightly tumid on the back, the centre of each swelling being orange-yellow; on each side of each of these segments is also a bright orange spot; 5th segment with a conspicuous median hump, velvety black on the summit, but hoary behind, and having one white spot on each side; a little distance below this is a pair of white spots closely approximate and on each side of them a larger orange spot; on the 6th, 7th, 8th, 9th, 10th and 11th segments is a median stripe, rather narrowed, entire, and of an orange-yellow colour in the centre of each segment, rather dilated, longitudinally divided and dingy white in the interstices: on each side of each segment, below this median stripe, are two white spots, one above the other, like the colon in printing, and there are three orange spots of different forms below the lower of these white spots; the 12th segment is decidedly humped, and has a conspicuous snowy white mark on the summit shaped something like a cross, but the hinder radius of the cross is sometimes wanting; the hind margin of this segment has a broad orange border; the 13th segment terminates in a kind of horn, quite black and directed backwards: below the lateral series of orange spots I have described, is a lateral stripe mottled with yellowish markings, among which are situated the spiracles, and below this again is a slender interrupted orange stripe. Feeds on Betula alba (birch), and is full fed on the 8th October.—*Edward Newman.*

Description of the Larva of Acronycta Psi.—Head rather large. Body hairy, with parallel sides, but humped on the back; the first hump is slender, long, erect, horn-like, and seated on the 5th segment; the second hump is shorter, broader, and on the 12th segment. Head black, hairy, shining, its divisions very convex; 2nd segment black, with a very narrow median yellow line; 3rd, 4th, 6th, 7th, 8th, 9th, 10th and 11th segments with a broad median yellow stripe and a median square spot of the same colour on the hinder part of the 12th segment; the horn-like hump on the 5th segment is intensely black and clothed with crowded short black hairs, intermixed with scattered long ones; on each side of the median stripe is an equally broad jet-black stripe, and in this on every segment, from the 5th to the 12th, both inclusive, are two transverse bright red spots, with two minute whitish warts between each pair, the warts emitting black bristles: below the black stripe on each side is a broad gray stripe emitting gray hairs, and including the black spiracles; this gray stripe is reddish on the anterior segments, the intensity of the red increasing towards the head. Belly, legs and claspers dingy flesh-coloured. Feeds on Cratægus oxyacantha (whitethorn), Pyrus communis (pear), &c. Full fed on the 16th September.—*Edward Newman.*

Description of the Larva of Acronycta leporina.—When disturbed falls off, and for a short time feigns death, in a semicircular posture; but its outline is concealed by the length of its hairs. Colour pale delicate green, completely covered with long curved silky hairs, all of them directed backwards; these hairs are either hoary white, or delicate pale canary-colour, or more decidedly yellow, and the body has a tendency to a similar variation in colour, although its normal tint is green: there are small erect fascicles of short black hairs on the back of the 4th and 6th segments, and single erect black hairs in a row on both sides. It feeds on Betula alba (birch), and is full fed on the 20th of September, when, concealing itself in a crevice of the bark, it makes a little excavation, in which it changes to a pupa, and remains in that state all the winter. In confinement it will gnaw a hole in cork about the circumference of its body, and after entering, gum up the mouth of the hole, so that its ulterior proceedings are completely concealed.—*Id.*

Description of the Larva of Acronycta Ligustri.—Will not roll in a ring when handled. Head delicate green and almost transparent, very shining, the mouth dark brown or almost black. Body glaucous-green, with a very narrow median white stripe down the back, not always extending to the 2nd or 13th segment; another stripe, rather broader than the median stripe and of a yellowish white on each side, extends from the head the entire length of the larva; this is about equidistant between the dorsal stripe and the spiracles; each segment emits eight, ten or twelve delicate silky-looking bristles. Feeds on Ligustrum vulgare (privet), and is full fed on the 26th of September.—*Id.*

Description of the Larva of Acronycta Rumicis.—Rolls in a loose ring when touched; has all the segments distinctly tumid, and the interstices between them deeply incised, as in the fasciculate larvæ of the Saturniadæ. Head small, shining and black, and emitting a few ferruginous hairs: each segment of the body has a circular series of ten warts, and each wart emits a number of stiff, straight, ferruginous bristles, which radiate from the wart as from a centre. Colour intensely black above and below; down the centre of the back is a series of orange-vermilion markings, two on each segment, except the second; the first of these bright markings is longitudinal, the second transverse; on each side of this median series is a subdorsal series of snowy-white markings, indistinct on the 2nd and 3rd segments, and absent from the 4th; the spiracles are snowy white, and beneath the spiracles on each side is a variegated stripe passing through every segment, except the 13th; on each segment this stripe is orange-red in the middle, yellow-white on the sides. Feeds on Urtica dioica (stinging nettle), and is full fed on the 20th of September.—*Id.*

Description of the Larva of Mamestra Persicariæ.—Rolls in a tight ring when disturbed. Head rather small and partially withdrawn into the 2nd segment, when at rest. Body smooth, very stout, attenuated anteriorly; 12th segment largest, tumid, and obtusely humped. Colour various, bright green, dingy green, rosy brown or dark brown; as in most other cases where this difference of colour prevails, the brown specimens produce males, the green ones females: in the following definition I describe only the intensity, not the colour of the markings. Head shining, pale, mottled with darker; 2nd segment with a nearly square dark velvety patch on the back, bounded on each side by a longitudinal white line, and being intersected in the middle by a third longitudinal white line; a pale narrow median stripe commences at the termination of this short white line and terminates on the 12th segment; on each side are two series of oblique dark markings; those of the upper series commence on the 5th segment and are continued to the 12th, each commencing about the middle of the side and passing obliquely upwards and backwards to the median stripe, and there meeting a corresponding marking on the opposite side and forming a series of V-shaped markings, the points of the V's directed backwards; those V's on the 5th and 6th segments have the greatest intensity; the 12th segment is also much darker than the rest, but the dark portion has lost the V-shape: there is a slender dark rivulet stripe on each side below the V-shaped markings, and from this descend five other oblique markings, taking an opposite direction to the upper ones, and terminating in the claspers; in the upper part of each of these is situated a white spiracle; the 12th segment has a pale squarish patch behind: the anterior part of the body is dark beneath. Feeds on a great variety of plants, and is particularly fond of elder; is full fed at the end of September, and buries itself in the earth in order to undergo the change to a pupa.—*Edward Newman.*

Description of the Larva of Agrotis præcox.—Head very pale brown, broadly notched on the crown, a dark V-shaped mark pointing backwards on the face. Colour of the body very various; a median dorsal series of longitudinal gray markings, each extending almost the length of a segment and dilated posteriorly; these markings are margined on each side by others of smoky brown, which are narrowed to mere lines in front, but dilated posteriorly; on each side of the narrowed portion is a spot of the same colour: all the aforesaid markings constitute a variegated median stripe; on each side of this is a ferruginous stripe interrupted at the segmental divisions, and below this on each side is a narrow stripe of smoke colour; then a narrow gray stripe, and then a broad smoke-coloured stripe extending to the spiracles, which are black; a gray stripe below the spiracles. Belly dingy gray. Feeds on Alsine media (chickweed); full fed at Midsummer. I am indebted to Mr. Gregson, of Liverpool, for this larva.—*Id.*

Description of the Larva of Trachea piniperda.—Head pale wainscot-brown: body clear pale brown, with five longitudinal white stripes, one of which is median, passing down the very middle of the back; the next on each side is subdorsal, and is bordered above by a delicate jet-black line; the next on each side is spiracular, and is accompanied beneath by an orange stripe: on all parts of this larva are scattered black dots, but I can find no order in their distribution. Feeds on Pinus sylvestris (the Scotch fir), and is full fed on the 10th of July.—*Id.*

Description of the Larva of Orthosia instabilis.—Rolls in a ring when touched. Head green, shining, unspotted. Body bright pea-green, with a whitish ring immediately behind the head, a narrow whitish stripe down the very middle of the back, another on each side supraspiracular; intermediate between the dorsal and supraspiracular stripes is another indistinct stripe, composed of a series of whitish dots: every part of the larva is sprinkling with these whitish dots, except the belly, which is sprinkled with black dots; the disks of the claspers are also intensely black: occasionally black dots of uniform size, but at irregular distances, appear on the back and sides. It feeds on oak, and is full fed on the 10th of July: it buries itself in the earth to assume the pupa state.—*Id.*

Description of the Larva of Tæniocampa gracilis.—Rolls in a ring when touched. Back broadly dull green, with three paler narrow stripes, and between these paler stripes are a series of pale dots: the broad green portion of the back is bordered on each side by a smoke-coloured stripe, the upper margin of which is suffused and indistinct, the lower margin sharply defined and very distinct; on each side below the smoke colour is a pale green stripe, paler still at both its upper and lower margins. Belly and claspers pellucid green. Feeds on Salix capræa (sallow); full fed on the 5th of July. I am indebted to the Rev. J. Hellins for this larva.—*Edward Newman.*

Description of the Larva of Hoporina croceago.—Rolls in a ring when touched. Colour wainscot-brown, tinged with orange, and delicately mottled with the same colour, of a rather darker hue; this darker colour is very apparent in a V-shaped mark on the back of every segment, the apex of the V pointing towards the tail of the larva. Feed son oak, and is full fed by the 5th of July. I am indebted to the Rev. J. Hellins for this larva.—*Id.*

Description of the Larva of Dianthecia capsincola.—Rolls in a ring when touched. Head rather small. Body smooth, attenuated at both ends. Head pale brown, very shining. Body dingy brown, opaque, with a very slight indication of a median stripe, and having each segment marked on the back with a somewhat obscure smoke-coloured V-shaped mark, the apex of which points towards the tail, and near its apex each V encloses a small transverse bar of its own colour, and at each extremity of each bar is a nearly circular dot still of the same colour; the spiracles are black, and immediately above each is a slight swelling. Feeds on the seeds of Lychnis vespertina (the white campion): it makes a perfectly round hole in the capsule, and usually feeds with half its body hanging out of the hole: it is full fed on the 4th of October. I am indebted to Mr. C. J. Biggs for this larva.—*Id.*

Description of the Larva of Euplexia lucipara.— Rolls in a very rigid ring when touched. Head shining, pale pellucid green: body opaque, but delicate green on the back, gradually paler on the sides until this colour merges in a white stripe below the spiracles; the belly below this white stripe is of a more intense green than the back; on each side is a series of rather darker oblique lines than the rest of the back, these are very indistinct; meeting on the back they combine to form indistinctly pronounced V-shaped markings pointing backwards, and their apices meeting on a central very narrow paler stripe; there are two conspicuous white dots on the 12th segment, and others less observable on various parts of the body. Feeds on birch: I beat several of these larvæ full fed on the 16th of September.—*Id.*

Description of the Larva of Hadena oleracea.—Rolls in a ring when disturbed. Usual colour pale delicate green: less commonly clear transparent brown, always having a narrow bright yellow stripe immediately below the spiracles; above this yellow stripe is a less distinct smoke-coloured stripe, which gradually vanishes into the green of the back: on the back of every segment are several jet-black dots; on the 2nd, 3rd and 4th segments these dots form a direct transverse series, but not on the following segments; on the sides of the larva below the spiracles are three or four more of these black dots, and on the 6th, 7th, 11th and 12th segments there are black dots on the belly: in addition to these somewhat conspicuous black dots, the back is sprinkled with multitudes of ocellated and very minute white dots. Feeds on Urtica dioica (nettle), Ulmus campestris (elm), several species of Rumex (dock) and many other plants. Full fed on September 26th: buries itself in the earth to assume the pupa state.—*Id.*

Description of the Larva of Hadena Pisi.—Rolls in a ring when disturbed. A very beautiful larva. Head shining, very pale green; a broad median stripe on the back olive-green, most delicately irrorated and margined with black; on each side of this a narrower stripe of bright clear yellow; again, below the yellow stripe a broader stripe of olive-green, which, like the median stripe, is delicately irrorated and margined with black; then follows, on each side, a narrower stripe, the upper half of which is white, the lower half yellow; this stripe includes the spiracles: belly pale green, irrorated with black along the spiracular line; legs and claspers pale green. After the last change of skin, the green parts frequently become rich purple-brown. Feeds on Pteris aquilina generally. Found by Mr. Thomas Huckett, feeding on Betula alba (birch). Full fed 29th September.—*Edward Newman.*

Description of the Larva of Hadena contigua.—Rolls in a ring when touched, but soon unrolls itself and commences crawling with great rapidity. Head shining, dingy green, reticulated with rufous-brown: body orange-ochre, inclining to rufous on the back, dingy yellowish green on the sides and belly: the rufous hue of the back is due to reticulated markings, which are crowded and clustered in certain parts so as to form a series of eleven Vs down the middle, the apex of each V pointing towards the tail; a narrow and interrupted rufous stripe includes the spiracles. Feeds on Betula alba (birch) and Quercus Robur (oak). Full fed on the 26th September.—*Id.*

Description of the Larva of Xylocampa lithorhiza.—Rolls in a ring when touched. Attenuated towards the head, and having the segments slightly prominent and well defined. Pale wainscot-brown, with a still paler median dorsal stripe; on the 8th segment is an ill-defined dark brown blotch on the back, and there are several irregular narrow dark lines on each side. Feeds on Lonicera periclymenum (honeysuckle), and is full fed on the 5th July. I am indebted to the Rev. J. Hellins for this larva. —*Id.*

Description of the Larva of Erastria venustula.—Does not roll in a ring or appear to feign death: smooth velvety, rather tumid in the 4th and 5th segments, and evidently connected at the interstices of the segments: colour purplish brown, with a paler median dorsal stripe indistinct throughout, and almost obliterated on the 3rd and 4th segments; there is also a rounded spot of the same pale colour as the median stripe on each side of the 5th segment. Feeds on the yellow blossoms of Tormentilla vulgaris (the common tormentil), and spins a slight cocoon on the surface of the earth about the 26th of August, when it is full fed. I am indebted to Mr. C. J. Biggs for this larva.—*Id.*

Description of the Larva of Abrostola Urticæ.—Never rolls in a ring, but sometimes feigns death and falls off its food when disturbed, assuming a bent posture. Attenuated in front, the 2nd, 3rd and 4th segments being attenuated and stretched out leech-like in walking; the 5th, 6th and 7th segments are tumid on the back, scarcely humped; the 8th, 9th and 10th segments rather tumid and very convex on the back; the 12th segment is humped, quadrate, and terminating in two sharp short distant points directed backward; between this and the 13th segment, is slightly concave, and the hind claspers are passed under the body in walking. Prevailing colour clear pale green, mixed with white-green on the back, and not varied with brown; the clear green forms an interrupted median stripe of shuttle-shaped markings down the back, one on each segment; also two broad oblique marks of the same green on each segment, distant in front, but approximate behind, and forming something like V-shaped markings pointing backward; a narrow white stripe along the middle of each side on the 5th, 6th and 7th segments; this is connected by a very distinct white line with the white on the back. Feeds on Urtica dioica (stinging nettle), and is full fed in September, when it spins up amongst the leaves.—*Edward Newman.*

Description of the Larva of Abrostola triplasia.—Never rolls in a ring, but feigns death when disturbed, and falls to the ground, assuming somewhat the figure of a pot-hook or letter S. Attenuated in front, the 2nd, 3rd and 4th segments being elongated and stretched out leech-like in walking; the 5th and 6th segments are humped and elevated in walking; the claspers are ten in number, the anterior pair, those on the 7th segment, being generally held clear of the ground in walking; the 12th segment is humped, and the hump concave, culminating in two lateral points; the outline of the larva from this last hump descends perpendicularly to the anal pair of claspers, and these evidently pass under the body whenever moved forwards in walking. Prevailing colour olive-green or dingy brown, very variable; 2nd, 3rd and 4th segments deeper olive-brown, with a whitish central dorsal stripe, and generally also a short lateral stripe of the same pale hue; the 5th and 6th segments have each a dark velvety patch on the centre of the back, which I have already described as humped; on the 5th segment this patch is triangular, the apex of the triangle being anterior, and the triangle surrounded by a whitish margin; the patch on the 6th segment is rounded before and behind and there margined with white, but open and not distinctly margined on the sides; the 12th segment has a transversely oblong dark velvet patch, surrounded with a white line: on all the segments, from the 5th to the 12th inclusive, is a rather indistinct and narrow white stripe just above the spiracles, which are also white; above this lateral stripe is an oblique line of the same colour on each segment. Feeds on Urtica dioica (nettle), Humulus lupulinus (hop), and is full fed about the end of September, when it spins up amongst the leaves.—*Id.*

Capture of Calosoma sycophanta near Penzance.—On examining, some weeks since, a few drawers of British insects, collected in this neighbourhood by Mr. W. H. Vingoe, naturalist, I was surprised at beholding in one of them a splendid specimen of Calosoma sycophanta, which he assured me was captured by himself in a field near Penzance, about three years since, but the exact locality he had forgotten.—*W. H. Hayward; Penzance, November* 2, 1860.

Is Diachromus germanus an Indigenous Insect?—The recent capture of Diachromus germanus has raised the question, Has it any claim to rank as an indigenous insect? It will be readily admitted that the appearance of this insect having been hitherto confined to that part of the coast which borders the English Channel would appear to give some warranty for the adoption of such an opinion; but probably, if we place the state of the case briefly in its correct position, a little attentive consideration of the circumstances may be found to shake, if not destroy, such hasty conclusions. If the species is not truly a British one, in what way are we to account for its getting a footing here? Does it fly across the channel, or does it swim? There is certainly another means of transit,—does it avail itself of the shipping, and take a passage on board? This is certainly possible, and we may therefore expect it to land on any spot between the Land's End and the Port of London. Up to the present time it does not appear to have chosen many localities for such a purpose: Kingsbridge, Deal and Hastings are the only spots apparently which it has selected. If we reject the idea of its being conveyed by shipping, let us see what distance it must fly in order to reach the above localities. Kingsbridge, in Devon, is about one hundred miles from the nearest point of the Continent; Deal is about twenty-five; and Hastings not less than forty-five miles: either of these distances, it will be allowed, is a tolerable long flight for little Diachromus. I have thus briefly stated the two most obvious means whereby it may be supposed possible that Diachromus may reach our shores; I will, in the next place, with equal brevity, state the circumstances under which the capture of the insect took place. The first capture was made on the 2nd of September; the second on the 3rd of the same month; for six or seven weeks previous the wind had been from the south, south-west, and occasionally it had veered slightly towards the north, but not once had it gone to the east—the only wind that would have assisted it in its flight had it crossed the Channel. On the day of its capture the wind changed to the north-west, the sun was bright and hot, which roused all insect-life from the chill which had so long kept them motionless; Staphylinidæ, Curculionidæ, Geodephaga, &c., took wing, and the strong breeze which blew from the north-west carried them over the town of Deal, and, in fact, scattered them along the whole line of the east coast; myriads were no doubt carried into the sea, and many a Diachromus probably perished in the Channel, or was lost on the fatal Goodwin Sands; the streets of Deal were literally sprinkled with insects; it was, in fact, impossible to walk without crushing them under foot; the whole were brought from the country by the north-west wind; Diachromus had therefore been carried into Deal from some locality situated at the back of the town of Deal. Had an east wind prevailed and a similar shower of insects appeared, doubtless many Continental rarities might have occurred. In my own opinion, taking all circumstances into consideration, Diachromus is undoubtedly a British insect, an indigenous species, and that it will be taken plentifully, like Drypta dentata and Polystichus fasciolatus, whenever its proper locality is once discovered.—*F. Smith; 27, Richmond Crescent, Islington.—Intelligencer.*

Capture of Velleius dilatatus in a Nest of Hornets.—I last night succeeded in capturing a nest of hornets, the first I ever had the chance of making an attack upon: I took the whole number prisoners, with the loss of three or four lives only,—I mean on the adversary's side,—I did not lose so many. In preparing to remove the nest a rather good-looking Staph, evidently "the worse for liquor" (chloroform), was observed staggering about among its legitimate "occupiers and owners," who were "too far gone" themselves either to assist or to molest him. I very soon had him "in custody" as one "drunk and incapable," and although I am not "well acquainted with the family," I think there is little doubt he will be found to answer to the name of Velleius dilatatus. I transplanted the colony during the night, and this morning the work of the nest is being carried on in a glazed box under my own eye. As the capture of a nest of hornets is not an every-day occurrence, I will, when time permits, detail the plan of attack I adopted in the present instance, when it will be seen that with proper and very simple precautions no danger whatever need be apprehended by the assailing party.—*S. Stone; Brighthampton, Witney, Oxfordshire, September 8, 1860.—Intelligencer.*

Capture of Dinarda dentata at Weybridge.—A few days ago I had the pleasure of receiving two living specimens of Dinarda dentata from Mr. Crotch, who has, I believe, taken it in some abundance: I do not know the species of ant in the nest of which they were found, but Mr. Reading has occasionally taken it in that of F. fusca. Yesterday I had the gratification of taking three examples of D. dentata from the nest of Formica sanguinea; probably this is the first time it has been discovered, in this country, in the nest of this species of ant. F. sanguinea is by no means rare at and in the neighbourhood of Weybridge. As I only devoted about half an hour to searching I am inclined to think that the Dinarda is not uncommon in the nest of F. sanguinea. I have not been successful in my search after novelties in the nest of F. cunicularia, but as the ant is generally distributed, and not at all uncommon about London, I still hope to find some novelty in the nest of that species. For the instruction of those who have not studied the Formicidæ, and are not well acquainted with the species and their habits, I may add that F. sanguinea closely resembles the wood ant (*F. rufa*), but it mines its galleries in banks, and particularly at this period of the season swarms with slaves, the latter being individuals of the species F. fusca. —*F. Smith ;* 27, *Richmond Crescent, Islington, N.*—'*Intelligencer.*'

The Hexagonal Form of Bees' Cells. — The following fact may perhaps be accepted as a help to the elucidation of one of the greatest marvels presented to us in the Animal Kingdom. The wonderful instinct of bees in the formation of their honeycomb has long excited the admiration and astonishment of man. The regular hexagonal construction of their cells has been almost viewed as a reproof to the geometric capacities of our own species; and philosophers have devoted their lives to the exposition of its mysteries, "nor," in the words of Spence and Kirby, "have its mysteries ever been fathomed," and again, "the construction of the combs of a bee-hive is a miracle which overwhelms our faculties." So many theories have been advanced on this complex subject that it seems almost preposterous to attempt any further explanation, but that the original (or if I may so say) predisposing cause of this arrangement is pressure or extraneous force may be received as a plausible idea; thus Buffon and others have described these cells as originally cylindrical, but changed to hexagonal by the pressure of the bees at work upon them, a theory refuted by the authors above noticed. Now, allowing this view of compression to be partly true, and without subscribing wholly to the notion that it is the direct result of the insects at work, there is another explanation I venture to put forth for this phenomenon. May it not result from the natural adaptability of the material, under the force of gravitation, to form hexagons, or to speak more plainly, in obedience to a law, the walls of each cell adapt themselves to the conditions superimposed, apart from any predetermination or instinctive impulse on the part of their builders? This seems to me at least fairly entitled to consideration, and chiefly from the following apparently trivial circumstance: having lately opened a box containing two or three hundred pills, which had been sent from a chemist's some time previous, in a hard condition, I was surprised, after removing the upper layers, to find, on approaching the bottom of the box, for the most part regular hexagons, roughly, yet strikingly resembling the cells of a honeycomb, and in some cases, where the pressure was unequal, pentagons appeared to have been formed: here, thought I, is possibly an analogy to the formation of the cells, *i. e.* bee-hive, and though duly conscious of the comparative worthlessness of so slight a fact on which to build a theory, I have considered it worth communicating for the mature consideration of your numerous scientific readers.—*J. Hawkes ; Kent County Ophthalmic Hospital, Maidstone, October* 30, 1860.

Proceedings of Societies.

ENTOMOLOGICAL SOCIETY.

November 5, 1860.—J. W. DOUGLAS, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be presented to the donors:—'Patent Office Reports: Agriculture,' for 1857, 1858, 1859; presented by the United States Government. 'Twelfth Annual Report of the Ohio State Board of Agriculture, with an Abstract of the Proceedings of the County Agricultural Societies to the General Assembly of Ohio: for the year 1857;' by the Board. 'Annual Report of the Board of Regents of the Smithsonian Institution, shewing the Operations, Expenditures and Condition of the Institution for the year 1858'; by the Institution. 'Proceedings of the Boston Society of Natural History,' Vol. vi., Sheets 23—28; Vol. vii., Sheets 1—9; by the Society. 'Bibliographia librorum Entomologicorum in America Boreali Editorum;' by the Author, W. Sharswood. 'Sitzungsberichte der Konigl bayer Akademie du Wissenschaften zu München,' 1860, Heft 1 and 2; by the Academy. 'The Zoologist' for November; by the Editor. 'Journal of the Society of Arts' for October; by the Editor. 'The Farm and the Garden,' Vol. ii. Nos. 19—21; by C. A. Wilson, Esq. 'The Athenæum' for October; by the Editor. 'De la Chasse des Hymenoptères;' by the Author, Dr. Sichel. 'The Journal of Entomology,' No. 2; by the Proprietors. Four specimens of Heliophobus hispidus; by F. Bond, Esq.

Exhibitions.

The President exhibited Mycetoporus angularis, *Rey and Mulsant*, a species not hitherto announced as British, which he had taken in the mud on the coast near Shoreham, Sussex, on the 7th ult.: he observed that the above authors described the sixth segment of the abdomen in this insect as testaceous-brown, which did not agree with his examples; the insect had been previously taken by Dr. Power and Mr. Waterhouse.

Dr. Power sent for exhibition the following British Coleoptera, with the accompanying remarks:—

Mycetoporus angularis, Rey and Muls. Cambridge, 1833. I have seen many other specimens in possession of Messrs. Waterhouse, Douglas, Brewer, &c.

Quedius infuscatus, Erich. Sent to me by Mr. Crotch for determination. Said to be found about nests of Formica fusca.

Ammæcius brevis, Erich. Taken by Mr. Hayward on the sands at Southport. These three insects, I believe, have not hitherto been announced as British.

Sphindus Gyllenhalli, Chev. Taken by C. Turner, in a fungus in the New Forest. This insect is figured by Spry and Shuckard, and described as found in Sherwood Forest, but does not occur in Stephens or any of our Catalogues; neither have I seen any British specimens except this.

Rhizophagus nitidulus, Erich. Scotland. Distinguished from R. dispar, which I have placed below it for comparison, by its larger size, cylindrical and convex form, the red band at base of the elytra, and especially by the last segment of the abdomen being deeply impressed beneath.

Læmophlæus bimaculatus, Payk. New Forest, August, 1860.

Oxylænus variolosus, Duf. Taken by myself from rotten fungus grown on a stump at Holme Bush, May, 1860.

Hetærius sesquicornis. Interesting as taken by myself from a new locality (Weybridge), in the autumn (October, 1860), and from nests of F. rufa, instead of those of F. fusca, as at the only other known locality, Hampstead.

Leptinus testaceus. Near London, October, 1860.

Batrisus venustus. Near Croydon, under bark, October, 1860.

Mycetoporus punctus, Erich. Near London, October, 1860.

Philonthus splendidulus, Erich. Scotland, 1860. Possibly sometimes confounded with P. aterrimus, but easily distinguished by having only five thoracic punctures and pale antennæ.

Platyderus dissectus. Taken by the Rev. A. H. Matthews near Nottingham.

Mr. M'Lachlan sent for exhibition a specimen of a new British species of Phryganidæ (Limnophilus borealis of Zetterstedt), identified from a specimen in the foreign collection in the British Museum, from Dr. Hagen; also an example of Agrypnia Pagetana (*Curtis*), taken originally near Yarmouth, and of which very few British specimens are known. Both of these species were taken by Mr. Winter in the Ranworth Fens.

Mr. John Scott exhibited the following Coleoptera, recently captured by himself:—

Leptinus testaceus. Taken in the London district.

Mycetoporus punctus. Ditto.

Philonthus splendidulus. Under bark of oak, at Abergavenny.

Omosita depressa. Under bark, at Crwmlyn.

Mr. Stevens exhibited some splendid Coleoptera, lately received from M. Mouhot, captured by him in Cambodia; amongst them may be mentioned both sexes of Baladeva Walkeri, first described and figured in the 'Transactions' of the Society, and the female hitherto unknown; a magnificent new Buprestis, equal in size to the largest known species of the family; and a splendid smaller species, also new, and both unique. Mr. Stevens also called attention to some fine new Longicorns and Anthribidæ in the collection.

Mr. Janson exhibited the following Coleoptera, not previously recorded as natives of Britain, *viz.* Bradycellus harpalinus, *Dej.*, Mycetoporus angularis, *Muls.*, and Hylastes cunicularius (*Knoch.*), *Eric.*

Mr. Janson also exhibited the nest of an Hymenopterous insect, apparently a species of Pelopæus, which had been found inside a grand piano-forte sent home from Ceylon to Messrs. Collard & Co., for repairs.

Mr. Waterhouse read a paper intituled "Notes on Chrysomelidæ in the Linnean and Banksian Collections."

Mr. Walker read "Characters of undescribed Lepidoptera in the Collection of W. Wilson Saunders, Esq."

Part vii. of the current volume of the Society's 'Transactions' was on the table.—*E. S.*

The Sea Anemones of Dawlish, Devon.—Seeing by your last most interesting and valuable work on Sea Anemones that you particularize different localities in which species are found, I venture to trespass on your valuable time by describing the varieties which I — although a tyro indeed — have found at Dawlish. Small orange, drab, and flesh-coloured Actinoloba Dianthus, with disks, when expanded, varying in circumference from a silver penny-piece to a shilling or even half-a crown, are common enough. And here and there, mostly in the company of the Plumose, I find Sagartia viduata, with the disk averaging three-quarters of an inch in diameter, and column, principally at night, extended to nearly two inches. Within three hundred yards of the shore at the Horse Rock point, on a low shelving mass of conglomerate rock, I have lately come upon a complete colony of the white, and a variety, translucent neutral-tinted white Dianthus, with disks as large as represented in figure 1, plate 1 of your book. May I describe to you here also the peculiarity of one of the large sized Actinoloba which I found? Unfortunately, after a month's healthy existence it died, ere I had seen your book, or I should have ventured to send it to you: a young Dianthus was attached to its column about a quarter of an inch from the base, with a disk at least half an inch in diameter. I noticed that if I touched the tentacles of the largest flower, both felt the shock and contracted; or if I fed the small one, the larger Dianthus began to draw in its tentacles and close up, and I saw the food moving up and down, as if in a liquid state, in the large column. Then again, if I fed the mother Dianthus, the tiny one contracted, and would expand with the same translucency afterwards, as the Dianthus usually does on being fed. There was no ridge or contraction that would warrant the separation afterwards of the two animals, the column of the smaller Dianthus seeming merely a bulging out of one side of the larger one. Brown or chocolate-coloured Sagartia bellis, with vermilion-streaked disks, and columns shading from flesh-colour to pinky violet where the suckers commence, I also found in great quantities on the same rocks: also S. Troglodytes, such as described at plate 2, figure 5 of your work; and I have no doubt that there are many other species of Anemones in the same place, but the tide flows so rapidly at this particular point that I have as yet but half explored its hanging rocks. Having once or twice, when in search of sea-weeds and Lucernaria, come upon a solitary floating Sagartia sphyrodeta on rocks uncovered at ordinary low tides, I felt persuaded that there must be a colony of them somewhere near, and soon I found them. On a stretch of perpendicular mud-covered rock, close to the Horse Rock point, I counted a hundred and seventy in one space, not averaging more than a yard in width and height, and since then I have found another numerous colony of the white-disked Sphyrodeta. Should you like to see any of the varieties which I have mentioned, I shall be very happy to send them to you, as I have had Sagartia sphyrodeta and viduata, as well as all sized Plumose Anemones, in perfect health, for six months. Last month Lucernariæ were to be found here in such quantities that one could scarcely take up a piece of Ulva without finding two or three. I kept two alive for a week without feeding, as I noticed that after one of their voracious meals the animal immediately grew drowsy,—if the word can be used—flaccid, and by next day it loosened its hold on the Ulva and was dead.—*Selina Hume Macleod; 24, The Strand, Dawlish, September 24, 1860.* (*Communicated by P. H. Gosse, Esq., F.R.S.*)

Physalia pelagica at Torquay.—My neighbour, Lieutenant Hughes, R.N., has just showed me a specimen of the Portuguese man-of-war (*Physalia pelagica*), so familiar to all who traverse the warmer regions of the Atlantic. The bladder is about five inches in length, brilliantly stained with Antwerp blue, merging into the general colourless translucency. The crest or "sail," is collapsed, and is only slightly tinged with pink, and the long pendent cord-like appendages (tentacles, &c.) are reduced, probably by the action of the waves on the shore, to their mere bases. Mr. Hughes found the specimen the day before yesterday, washed up on the beach at Babbicombe. It was alive, but not in vigour, for he lifted it and brought it home in his hand with impunity, not having the fear of Mr. G. Bennett's experience before his eyes; nevertheless, when put into an aquarium, it gave tokens of life for many hours, by forcible contractions at intervals. The species has been found on our western shores before, but its occurrence is sufficiently rare to be put among the *notabilia* of the 'Zoologist.' —*P. H. Gosse; Sandhurst, Torquay, October* 31, 1860.

Correction of an Error in the Food-plants of the Larva of Notodonta dictæa.—Mr. Newman (Zool. 7257), on the authority of Mr. Huckett, gives Betula alba as one of the food-plants of the larva of Notodonta dictæa. This assertion has been previously made by various collectors, and this tree is included in the list of food-plants in several entomological works. I cannot, however, help thinking that there is some mistake. I have been in the habit of taking this larva ever since I was a little boy, but always on some species of poplar or sallow. Many and many a birch tree have I thrashed and examined, and though on them I have found eggs and larvæ of N. camelina, N. dictæoides and N. dromedarus, never at any time or by any chance have I seen the slightest trace of N. dictæa, nor have I ever met or heard of an entomologist at home or abroad who had done so. It is quite unnecessary for me to say that it is the farthest from my wish to cast any doubts on the accuracy or veracity of my brother-knights of the net Messrs. Newman and Huckett, but I do ask them to tell us in the pages of the 'Zoologist,' whether they have ever found or fed a larva of N. dictæa on birch, or whether they make the assertion upon hearsay? and I make the same request of all the readers of the 'Zoologist' in all parts of the world. It is no use perpetuating an error. Some of the older entomological authors were very careless and inaccurate in their lists of the food-plants of Lepidoptera, and it has been far too common a custom for succeeding writers to copy their assertions without proving by their own practical and optical experience whether they were correct. —*H. Harpur Crewe; Drayton-Beauchamp Rectory, near Tring, November* 12, 1860.

[I am really obliged for the correction of this very manifest error, and have no hesitation whatever in acknowledging it to be so. Thinking it important that the same volume that contains the error should also contain the correction, I have thought it desirable to insert Mr. Crewe's letter *here*, although rather out of the usual course. The error is not a copied one: and I may here state, once for all, that every part of my descriptions are made without reference to any prior description, unless such fact is explicitly stated. For every error detected by my readers I alone am responsible, and shall feel grateful for all corrections.—*Edward Newman.*]

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Occurrence in Ireland of Dianthæcia capsophila.—A new species of Dianthæcia, which proves to be D. capsophila of Boisduval and Guenée, has been taken in Ireland. Our familiar D. capsincola is the British species which it most nearly resembles. I leave to the unfortunate captor the disagreeable duty of announcing his name to the entomological world: having no enmity against him, I will not be the innocent cause of bringing on him the thousand applications which such a disclosure would inevitably elicit.—*Edward Newman.*

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